CLAIMS

1. (Original) An electrode comprising a conductive material-doped ester-cured alkaline phenolic resole resin containing conducting alkaline salts.

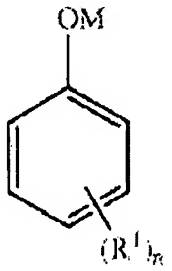
2. (Original) An electrode as claimed in claim 1 wherein the resin to conducting material weight ratio is from 0.001 to 100:1.

3. (Previously presented) An electrode as claimed in claim 1 wherein the conducting material comprises carbon and/or a non-carbon conductive filler.

4. (Original) An electrode as claimed in claim 3 wherein the carbon is in the form of graphite or an amorphous carbon and/or the non-carbon conductive filler is in the form of a metal, metal oxide, and/or metal-coated graphite and/or glass.

5. (Previously presented) An electrode as claimed in claim 1 wherein the resin is a reaction product of an ester curing agent with a phenolic resole and a base.

6. (Original) An electrode as claimed in claim 5 wherein the phenolic resole is a reaction product of a phenol-reactive aldehyde with an alkaline compound of formula



(I)

wherein R^1 is a straight or branched chain optionally unsaturated alkyl group containing from 1 to 8 carbon atoms (preferably from 1 to 4 carbon atoms, more preferably from 1 to 2 carbon atoms) optionally substituted by a halogen atom (preferably chlorine) or a hydroxy

group, a halogen atom (preferably chlorine), a hydroxy group, and/or a phenyl or benzyl group (optionally substituted by a hydroxy group and/or a straight or branched chain alkyl group containing from 1 to 8 carbon atoms (preferably from 1 to 4 carbon atoms, more preferably from 1 to 2 carbon atoms) optionally substituted by a halogen atom (preferably chlorine) or a hydroxy group);

M is a mixture of hydrogen ions and at least one further cation (preferably the at least one further cation is an alkali metal cation (preferably sodium, lithium or potassium), an alkaline earth metal cation (preferably barium, magnesium or calcium), and/or a $N(R^2)4+$ ion (wherein each R^2 is the same or different and is hydrogen or a straight or branched chain alkyl group containing from 1 to 4 carbon atoms)) wherein the molar ratio of hydrogen ions to the at least one further cation is sufficient for the pH to be greater than 7 and is preferably from 2:1 to 1:1; and

n is from 0 to 2.

7. (Original) An electrode as claimed in claim 6 wherein the phenol-reactive aldehyde is a compound of formula

RCHO (II)

wherein R represents hydrogen atom or a straight or branched chain alkyl group having from 1 to 8 (preferably from 1 to 4, more preferably from 1 to 2, most preferably 1) carbon atoms; or a precursor of a compound of formula (II).

8. (Previously presented) An electrode as claimed in claim 6 wherein the phenol-reactive aldehyde is reacted with the compound of formula (I) in a ratio of from 1:1 to 1:3, preferably from 1:1.2 to 1:3, more preferably from 1:1.5 to 1:3.

9. (Previously presented) An electrode as claimed in claim 5 wherein the ester curing agent is of formula

R^3COOR^4 (III)

wherein R^3 represents a hydrogen atom or a straight or branched chain alkyl group containing from 1 to 8 carbon atoms (preferably from 1 to 4, more preferably from 1 to 2 carbon atoms) optionally substituted by a halogen atom; and

R^4 represents a straight or branched chain alkyl group containing from 1 to 8 carbon atoms (preferably from 1 to 4, more preferably from 1 to 2 carbon atoms) optionally substituted by one or more hydroxy and/or R^3COO-- groups, or

a phenyl group optionally substituted by a straight or branched chain optionally unsaturated alkyl group containing from 1 to 8 carbon atoms (preferably from 1 to 4 carbon atoms, more preferably from 1 to 2 carbon atoms) optionally substituted by a hydroxy group, a halogen atom (preferably chlorine), a hydroxy group, and/or a phenyl or benzyl group (optionally substituted by a hydroxy group and/or a straight or branched chain alkyl group containing from 1 to 8 carbon atoms (preferably from 1 to 4 carbon atoms, more preferably from 1 to 2 carbon atoms)); or

R^3 represents a chemical bond to R^4 and R^4 represents a straight or branched chain alkyl group containing from 2 to 10 carbon atoms (preferably from 2 to 4 carbon atoms).

10. (Previously presented) An electrode as claimed in claim 1 wherein the resin includes a plasticiser to increase flexibility of the resin.

11. (Cancelled) An electrode substantially as hereinbefore described and/or as illustrated with reference to FIGS. 3 and/or 4 of the drawings.

12. (Withdrawn) A separator plate suitable for use in a fuel cell having one or more flow field for directing gas flow wherein the plate comprises an ester-cured alkaline phenolic resole resin containing conducting alkaline salts.

13. (Withdrawn) A separator plate as claimed in claim 12 wherein the resin is as defined in claim 2.

14. (Withdrawn) A separator plate as claimed in claim 12 or claim 13 which has two flow fields.

15. (Withdrawn) A separator plate substantially as hereinbefore described and/or as illustrated with reference to FIGS. 4 and/or 5 of the drawings.

16. (Withdrawn) An electrolyte suitable for use in an electrical device which comprises an ester-cured alkaline phenolic resole resin containing conducting alkaline salts.

17. (Withdrawn) An electrolyte as claimed in claim 16 wherein the resin is as defined in claim 1.

18. (Withdrawn) An electrical device comprising:

(a) a negative electrode;

(b) a positive electrode; and

(c) an electrolyte means; and optionally

(d) a separator and/or bipolar plate;

wherein one or more electrode, electrolyte and/or separator or bipolar plate comprises an ester-cured alkaline phenolic resole resin containing conducting alkaline salts.

19. (Withdrawn) An electrical device as claimed in claim 18 wherein the resin is as defined in claim 1.

20. (Withdrawn) An electrical device as claimed in claim 18 wherein the separator plate is as defined in claim12.

21. (Withdrawn) An electrical device as claimed in claim 18 which is a cell, a battery including two or more cells, or a capacitor.

22. (Withdrawn) The electrical device as claimed in claim 18 wherein the electrolyte means is in the form of an electrolyte or it is arranged to receive an electrolyte.

23. (Withdrawn) The electrical device as claimed in claim 22 wherein the electrolyte means is in the form of a conduit through which an electrolyte could flow during operation of the cell or in the form of a container into which an electrolyte could be placed at least during operation of the cell.

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (New) An electrode as claimed in claim 1 wherein the conductive material-doped ester-cured alkaline phenolic resole resin containing conducting alkaline salts comprises a foamed 3-d form of the conductive material-doped ester-cured alkaline phenolic resole resin containing conducting alkaline salts.